

Głowacki, J.

3887

677.151.031.46

MT

Głowacki J. Combing the Fibre of China Grass.

„Czesanie włókna ramie”. (Prace Inst. Włókien. No. 12), Warszawa, 1954, WPLIS, 11 pp., 28 tabs.

A description of tests carried out on combing fibres of ramie, after having submitted them to a preliminary preparation consisting of 1) mechanical softening; 2) mechanical softening combined with emulsion moistening; 3) biological steeping combined with mechanical softening; 4) chemical steeping combined with mechanical softening. In all four cases, it was found that 1) when the speed of the combing canvass of the mechanical combers was increased, the production diminished proportionally; 2) when the needles on the combing canvass were more densely disposed, a slight proportional lowering of efficiency and a slight rising of the average count resulted; 3) augmenting the number of steps on the mechanical combers induced a proportional lowering of production and a rise in the average count of the fibre cutted; 4) moistening of the fibre with emulsion before combing improved the effects of combing.

Głowacki, J.

3830

077.019 : 677.143.021.6

Głowacki J., Dowgiałewicz S. Characteristics of the Combed Fibre of Ramie and the Comber Waste, on the Basis of Organotechnical Valuation and Laboratory Tests. *MT*

„Charakterystyka czesanego włókna ramii i wycierów ramiowych na podstawie oceny organotechnicznej i analizy laboratoryjnej”. (Prace Inst. Włókien. No. 12), Warszawa, 1954, WPLIS, 18 pp., 7 fig., 30 tabs.

Larger quantities of combed fibre and comber waste were tried on the basis of the grade of evenness of the combing as well as of the softness of the fibre. Selected assortments were tested in the laboratory to confirm the correctness of the organotechnical valuation. Physical properties of the fibre were examined (strength, flexibility, divisibility, length and contents of glued strips). These investigations confirmed the organotechnical valuation. Suggestions are made concerning the possibility of spinning the raw material examined.

(1)

P/045/60/019/001/008/009
B022/B070

AUTHOR: Głowacki, Jan

TITLE: Quenching of Photoluminescence of Solutions by
Non-absorbing Foreign Molecules

PERIODICAL: Acta Physica Polonica, 1960, Vol. 19, No. 4, pp. 513 - 523

TEXT: In the theory of quenching of photoluminescence of solutions by Jabłoński (Ref.8), the center is considered to consist of an excited luminescent molecule enveloped by shells consisting of monomolecular layers of the solvent, which may contain quenching molecules. Assuming that the quenching probability is different from zero only for quenching by quenchers situated within a certain active sphere it is found

that $\frac{\eta}{\eta_0} = \frac{1 - e^{-\nu}}{\nu}$, where η_0 denotes the yield without quenchers.

$\nu = nv$, n = number of quenching molecules per unit volume, v = volume of the active sphere. One aim of the present paper is to check experimentally this formula for the case of quenching by non-absorbing foreign

Card 1/4

Quenching of Photoluminescence of Solutions by Non-absorbing Foreign Molecules P/045/60/C'9/001/008/009
3022/3070

molecules. The formula was checked for liquid and solid solutions of fluorescein, rhodamine B and "yellowish" eosin quenched by KI and tartaric acid. In all cases the photoelectric method with photomultiplier was used for measuring the relative yield of fluorescence. Fig. 1 shows the experimental and theoretical curves of $\frac{I}{I_0}$ versus V for fluorescein and rhodamine B, each in sugar solution quenched by KI. Fig. 2 shows the experimental relative fluorescence yield $\frac{I}{I_0}$ as a function of the concentration of quenchers for the same two substances and compares it with the theoretical curve calculated by two different theories. It is seen that the simplified model suffices for the description of the quenching process of fluorescence by non-absorbing molecules. In spite of the approximations, the same formula also agrees with the experimental results of quenching by absorbing molecules of luminescence of non viscous solutions. This is checked with aqueous solutions of fluorescein quenched by KI. The theoretical and experimental results are given in Fig. 3. The dependence of the degree of polarization of fluorescence on the concentration of the quenching molecules was also

Card 2/4

Quenching of Photoluminescence of Eosin by Non-absorbing Foreign Molecules
 1/04/80/01/004/000/000
 B022/B070

investigated. The quenching type of luminescence of "yellowish" eosin (microscopic dye, molecular weight 687.026) in water by tartaric acid was also examined. The results of measurement of the intensity of luminescence and pH for different concentrations of tartaric acid are given in Figs. 6 and 7. Fig. 8 shows the absorption spectrum. The change of the absorption spectrum with the concentration of the tartaric acid shows that the quenching of photoluminescence of eosin is the result of the formation of non-fluorescent complexes of eosin and tartaric acid molecules. The experimental points are in good agreement with the theoretical curve of the hyperbolic type. In the concluding remark it is said that for an adequate description of luminescence quenching, the simplified model of the luminescence center with the active sphere is sufficient. The experimental results of photoluminescence quenching by non-absorbing foreign molecules in liquid and solid solutions agree with Jabłoński's theory. Moreover, it offers an adequate description of quenching by absorbing foreign molecules, the absorption spectrum of which overlaps the fluorescence band of the luminescence molecule. The author expresses his indebtedness to Professor A. Jabłoński for suggesting the subject and his critical remarks. He also thanks

Card 3/4

GLOWACKI, J.

SURNAME, Given Names

Country: Poland

Academic Degrees: /not given/

Affiliation: Department of Physics (Katedra Fizyki) of the Higher Pedagogical School
(Wyższa Szkoła Pedagogiczna), Gdansk

Source: Warsaw, Bulletin de l'Academie Polonaise des Sciences, Serie des Sciences
Mathematiques, Astronomiques et Physiques, Vol 9, No 2, Feb 61, pp 113-118

Data: "The Influence of Tartaric Acid on the Photoluminescence of Dye Solutions."

GPO 981643

GLOWACKI, J.

The influence of tartaric acid on the photoluminescence of dye solutions. Bul Ac Pol mat 9 no.2:113-118 '61.

1. Department of Physics, Normal School Gdansk. Presented by A. Jablonski.

(Tartaric acid) (Dyes and dyeing)

GIOWACKI, Jan

Decay and yield of the photoluminescence of rigid solutions.
Mater fiz chem Gdansk 2 63-66 '62.

1. Physics Department, School of Education, Gdansk.

P/047/62/013/004/002/003
D207/D308

AUTHOR: Glowacki, Jan

TITLE: quenching the photoluminescence of solutions
by foreign substances

PERIODICAL: Postepy fizyki, v. 13, no. 4, 1962, 431-454

TEXT: A review of Western and Soviet-bloc literature mostly of the post-war period (1946-1960) but with some historical references going back to 1907. Subjects discussed are: Quenching of photoluminescence by non-absorbing foreign substances (diffusion theory of quenching of the photoluminescence of liquid solutions; theory based on the layer model of a luminescence center; quenching the fluorescence of solid solutions; polarization of the emission anisotropy on quenching of the photoluminescence); migration of the electron excitation energy in solutions (quenching of the photoluminescence by such migration; quenching of the phosphorescence and energy migration between unstable states). There are 80 references and 10 figures.

Card 1/2

quenching the photoluminescence ...

P/047/62/013/004/002/003
D207/D308

ASSOCIATION:

Katedra Fizyki Wyższej Szkoły Pedagogicznej,
Gdańsk (Chair of Higher Physics, Pedagogical
College, Gdańsk)

Card 2/2

9/081/65/000/002/009/088
1119/3180

AUTHOR: Glowacki, J.

TITLE: Effect of illumination on various ionic forms of fluorescein in aqueous solution

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1963, 78, abstract 2B473 (Bull. Acad. polon. sci. Ser. sci. math. astron. et phys., v. 10, no. 2, 1962, 115-119. [Eng.; summary in Russ.])

TEXT: Aqueous solutions of fluorescein (I) ($4 \cdot 10^{-6}$ g/dm³) were exposed to light of different wavelengths, and the changes in the absorption spectra of the solutions so exposed were studied. It was shown that the two maxima on the light absorption curve (4560 and 4853 Å) were due to the fact that I in aqueous solution takes two forms: as a univalent and a bivalent anion. When the solution is illuminated with light of λ (max) 5200 Å the univalent anions become converted to bivalent. Light of λ (max) 7000 Å causes simultaneous decolorization of both ionic types of I. [Abstracter's note: Complete translation.]

Card 1/1

GLOWACKI, Jan

Extinction of the photoluminescence of solutions by foreign substances. Postepy fizyki 13 no.4:431-454, '62.

1. Katedra Fizyki, Wyzsza Szkola Pedagogiczna, Gdansk.

• • • • •

1. The first step is to identify the problem. This involves understanding the situation and the goals that need to be achieved. It is important to gather all relevant information and to define the problem clearly.

Journal of Management Education 30(6)p.789-804
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<http://www.sagepub.com/journalsPermissions.nav>

GLOWACKI, J.

On the dependence of the quenching constant of fluorescence on the polarizability and diamagnetic susceptibility of quenchers. Bul. Ac. Pol. mat. 11 no.7:487-492'63.

1. Department of Physics, Normal School, Gdansk. Presented by A. Jablonski.

GLOWACKI, J.; KAMIŃSKA, U.

Influence of neutral salts on the photoluminescence of various ionic forms of fluorescein. Acta physica Pol 23 no.1:43-52 Ja '63.

1. Physics Department, High School of Pedagogy, Gdansk.

ACCESSION NR: AP4011478

P/0045/63/024/004/0555/0556

AUTHOR: Glowacki, Jan

TITLE: The dependence of the quenching of fluorescence of dyes on the position of the maxima of fluorescence and absorption

SOURCE: Acta physica polonica, v. 24, no. 4, 1963, 555-556

TOPIC TAGS: quenching of dye fluorescence, fluorescence maxima, absorption maxima, quenching constant

ABSTRACT: An analysis of the results of measurements made by the author shows that the probability of fluorescence quenching by a quencher is a function of the polarizability of the quencher molecule, and is independent of the temperature and, most probably, of the viscosity of the liquid in which it is dissolved. Another physical property of the quencher molecule, the dipole moment, influences fluorescence quenching constant through the quenching constant F_0 (the quenching constant F_0 versus the position of the fluorescence and absorption maxima of the luminescent molecule shows that this constant depends also on the position,

Card 1/2

ACQUISITION NO. 10001199

... corresponding to the ... excited state ... dipole moment in ... constant are in progress.

... ..

ASSOCIATED: (Academy of Sciences, Department, College of Pedagogy)

SUBMITTED: 16May63

DATE ACQ: 22Jan64

ENCL: 00

SUB CODE: OP

NO REF SOV: 001

OTHER: 006

Card 2/2

GLONACKI, Jan

New achievements in the physics of lasers. Postepy fizyki
15 no. 3:275-286 '64.

1. Department of Physics, Teachers' College, Gdansk.

ACCESSION NR: AP4024336

P/0045/64/025/002/0301/0302

AUTHOR: Glowacki, Jan

TITLE: Influence of some optical processes on population inversion in a three-level laser

SOURCE: Acta physica polonica, v. 25, no. 2, 1964, 301-302

TOPIC TAGS: laser, three level laser, population inversion, metastable level, metastable level population, stimulated emission, diamagnetic impurity, luminescence, luminescence quenching, nonradiative transition

ABSTRACT: The author describes a new method of increasing the metastable level population in a laser with an organic active substance. Since the probability of intercombination transitions from an excited F level to a metastable M level is increased by the presence of diamagnetic impurities, the metastable level is populated, the excited level is depopulated and the intensity of slow fluorescence is increased due to nonradiative electronic transitions from the F to the M level. Since the amplification produced by stimulated emission is proportional to the excess population of the upper level, the presence of a nonabsorbing diamagnetic impurity such as KBr, KCNS, KI or other halides can increase the power emitted or decrease the generation threshold. The probability of such nonradiative transitions depends

Card 1/2

ACCESSION NR: AP4024336

on either the atomic number of the halogen atom or its diamagnetic susceptibility.

ASSOCIATION: Katedra Fizyki, Wyższa Szkoła Pedagogiczna, Gdańsk (Department of Physics, Pedagogical Institute)

SUBMITTED: 29Nov63

DATE ACQ: 15Apr64

ENCL: 001

SUB CODE: EC, DP

NO REF SOV: 004

OTHER: 010

Card 2/2

GLOWACKI, J.

Influence of solvent structure on the dimerization process of
water Radcliff solution. Pt 1. Acta physica Pol 26 no. 5:905-
918 N '64

1. Department of Physics of the Teachers College, Gdanek.
Submitted April 10, 1964.

GLOWACKI, J.

Further investigations into the fluorescence quenching
of dyes by neutral salts. Acta physica Pol 25 no.6:
767-780 Je '64.

1. Department of Physics, Teachers College, Gdansk.

L 18807-66 EWT(1) LP(c)

ACC NR: AP5014676

SOURCE CODE: PO/0045/65/027/004/0527/0536

AUTHOR: Glowacki, J.

ORG: Physics Department, High Pedagogical School, Gdansk

TITLE: Molecular interaction mechanisms in fluorescence quenching processes

SOURCE: Acta physica polonica, v. 27, no. 4, 1965, 527-536

TOPIC TAGS: molecule, molecular interaction, fluorescence quenching, polarizability, ~~organic quencher~~ fluorescence, dipole moment

ABSTRACT: It has been found that the charge of interacting molecules has no influence on the shape of the dependence of the fluorescence quenching constant of solutions on the polarizability of the quenchers and their diamagnetic susceptibility. In the case of organic quenchers (iodo-, bromo-, chlorobenzene) there is a similar dependence of the fluorescence quenching constant on the polarizability and diamagnetic susceptibility of the substituents as in the case of the ions J⁻, CNS⁻, Br⁻, Cl⁻, suggesting that the primary role in the process of quenching should be attributed to the substituents and not the molecule as a whole. The presence of a dipole moment in the quenching molecule results in a decrease in its quenching effectiveness. Orig. art. has: 8 figures, 2 tables and 3 formulas. [Author's abstract.]

SUB CODE: 20/ SUBM DATE: 01Jun64/ ORIG REF: 001/ OTH REF: 007/

Card 1/1

GLOWACKI, J.

Traktor. (Wyd. 1.) Warszawa, Państwowe Wydawn. Rolnicze i Leśne, 1954. 147 p.

(Traction engines. 1st ed.)

DA

Not in DLC

SO: "Monthly List of East European Accessions (EFAL) Ltr. Vol. 6, No. 10, October 1957. Uncl.

1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. 19. 20. 21. 22. 23. 24. 25. 26. 27. 28. 29. 30. 31. 32. 33. 34. 35. 36. 37. 38. 39. 40. 41. 42. 43. 44. 45. 46. 47. 48. 49. 50. 51. 52. 53. 54. 55. 56. 57. 58. 59. 60. 61. 62. 63. 64. 65. 66. 67. 68. 69. 70. 71. 72. 73. 74. 75. 76. 77. 78. 79. 80. 81. 82. 83. 84. 85. 86. 87. 88. 89. 90. 91. 92. 93. 94. 95. 96. 97. 98. 99. 100. 101. 102. 103. 104. 105. 106. 107. 108. 109. 110. 111. 112. 113. 114. 115. 116. 117. 118. 119. 120. 121. 122. 123. 124. 125. 126. 127. 128. 129. 130. 131. 132. 133. 134. 135. 136. 137. 138. 139. 140. 141. 142. 143. 144. 145. 146. 147. 148. 149. 150. 151. 152. 153. 154. 155. 156. 157. 158. 159. 160. 161. 162. 163. 164. 165. 166. 167. 168. 169. 170. 171. 172. 173. 174. 175. 176. 177. 178. 179. 180. 181. 182. 183. 184. 185. 186. 187. 188. 189. 190. 191. 192. 193. 194. 195. 196. 197. 198. 199. 200. 201. 202. 203. 204. 205. 206. 207. 208. 209. 210. 211. 212. 213. 214. 215. 216. 217. 218. 219. 220. 221. 222. 223. 224. 225. 226. 227. 228. 229. 230. 231. 232. 233. 234. 235. 236. 237. 238. 239. 240. 241. 242. 243. 244. 245. 246. 247. 248. 249. 250. 251. 252. 253. 254. 255. 256. 257. 258. 259. 260. 261. 262. 263. 264. 265. 266. 267. 268. 269. 270. 271. 272. 273. 274. 275. 276. 277. 278. 279. 280. 281. 282. 283. 284. 285. 286. 287. 288. 289. 290. 291. 292. 293. 294. 295. 296. 297. 298. 299. 300. 301. 302. 303. 304. 305. 306. 307. 308. 309. 310. 311. 312. 313. 314. 315. 316. 317. 318. 319. 320. 321. 322. 323. 324. 325. 326. 327. 328. 329. 330. 331. 332. 333. 334. 335. 336. 337. 338. 339. 340. 341. 342. 343. 344. 345. 346. 347. 348. 349. 350. 351. 352. 353. 354. 355. 356. 357. 358. 359. 360. 361. 362. 363. 364. 365. 366. 367. 368. 369. 370. 371. 372. 373. 374. 375. 376. 377. 378. 379. 380. 381. 382. 383. 384. 385. 386. 387. 388. 389. 390. 391. 392. 393. 394. 395. 396. 397. 398. 399. 400. 401. 402. 403. 404. 405. 406. 407. 408. 409. 410. 411. 412. 413. 414. 415. 416. 417. 418. 419. 420. 421. 422. 423. 424. 425. 426. 427. 428. 429. 430. 431. 432. 433. 434. 435. 436. 437. 438. 439. 440. 441. 442. 443. 444. 445. 446. 447. 448. 449. 450. 451. 452. 453. 454. 455. 456. 457. 458. 459. 460. 461. 462. 463. 464. 465. 466. 467. 468. 469. 470. 471. 472. 473. 474. 475. 476. 477. 478. 479. 480. 481. 482. 483. 484. 485. 486. 487. 488. 489. 490. 491. 492. 493. 494. 495. 496. 497. 498. 499. 500. 501. 502. 503. 504. 505. 506. 507. 508. 509. 510. 511. 512. 513. 514. 515. 516. 517. 518. 519. 520. 521. 522. 523. 524. 525. 526. 527. 528. 529. 530. 531. 532. 533. 534. 535. 536. 537. 538. 539. 540. 541. 542. 543. 544. 545. 546. 547. 548. 549. 550. 551. 552. 553. 554. 555. 556. 557. 558. 559. 560. 561. 562. 563. 564. 565. 566. 567. 568. 569. 570. 571. 572. 573. 574. 575. 576. 577. 578. 579. 580. 581. 582. 583. 584. 585. 586. 587. 588. 589. 590. 591. 592. 593. 594. 595. 596. 597. 598. 599. 600. 601. 602. 603. 604. 605. 606. 607. 608. 609. 610. 611. 612. 613. 614. 615. 616. 617. 618. 619. 620. 621. 622. 623. 624. 625. 626. 627. 628. 629. 630. 631. 632. 633. 634. 635. 636. 637. 638. 639. 640. 641. 642. 643. 644. 645. 646. 647. 648. 649. 650. 651. 652. 653. 654. 655. 656. 657. 658. 659. 660. 661. 662. 663. 664. 665. 666. 667. 668. 669. 670. 671. 672. 673. 674. 675. 676. 677. 678. 679. 680. 681. 682. 683. 684. 685. 686. 687. 688. 689. 690. 691. 692. 693. 694. 695. 696. 697. 698. 699. 700. 701. 702. 703. 704. 705. 706. 707. 708. 709. 710. 711. 712. 713. 714. 715. 716. 717. 718. 719. 720. 721. 722. 723. 724. 725. 726. 727. 728. 729. 730. 731. 732. 733. 734. 735. 736. 737. 738. 739. 740. 741. 742. 743. 744. 745. 746. 747. 748. 749. 750. 751. 752. 753. 754. 755. 756. 757. 758. 759. 760. 761. 762. 763. 764. 765. 766. 767. 768. 769. 770. 771. 772. 773. 774. 775. 776. 777. 778. 779. 780. 781. 782. 783. 784. 785. 786. 787. 788. 789. 790. 791. 792. 793. 794. 795. 796. 797. 798. 799. 800. 801. 802. 803. 804. 805. 806. 807. 808. 809. 810. 811. 812. 813. 814. 815. 816. 817. 818. 819. 820. 821. 822. 823. 824. 825. 826. 827. 828. 829. 830. 831. 832. 833. 834. 835. 836. 837. 838. 839. 840. 84

10. The Commission has been informed that the Government of the Republic of the Philippines has agreed to accept the findings and recommendations of the Commission and to take the necessary steps to implement them.

1. *Phragmites australis* (Cav.) Trin. ex Steud.

at the same time, the Commission, while it is not

GLOWACKI, Janusz, mgr inż.

Selected problems of plastics; International Congress in Amsterdam.
Przegl techn 84 no.23/24:5 9-16 Je '63.

GLOWACKI, Jan

Influence of some optical processes on population inversion
in a three-level laser. Acta physica Pol 25 no.2:301-302
F '64

1. Physics Department, High School of Pedagogy, Gdansk.

GŁOVATSKI, Yan [Glowacki, Jan] (Pol'sha)

"Fulminant" choked disk. Vrach.delo no.10:102-104 O '62.

(MIPA 15:10)

1. Neyrokhirurgicheskaya klinika (zav. - prof. doktor A.Kunitski)
Meditzinskoy akademii Krakova.

(OPTIC NERVE--DISEASES)

KUNICKI, Adam; GLOWACKI, Jan

Early and late results of surgical treatment of 175 cases of trigeminal neuralgia. Acta medica polona 3 no.1:55-60 '62.

1. The Neurosurgical Clinic, Medical Academy, Cracow Director
prof. dr A.Kunicki.

(TRIGEMINAL NEURALGIA surg)

GLOWACKI, Jan

Fulminating papilledema. Acta medica polona 3 no.2:203-206 '62.

1. Neurosurgical Clinic, Cracow Academy of Medicine, Cracow, Poland

Director: Professor Dr A. Kunicki.

(PAPILLEDEMA case reports)

STEFANKO, Stanislaw; GLOWACKI, Jan

A case of haemangiopericytoma of the meninges. Acta med. pol. 3
no.4:455-461 '62.

1. Polish Academy of Sciences, Department of Neuropathology, Cracow,
The Neurosurgical Clinic, Medical Academy, Cracow. Director: Prof.
Dr A. Kunicki.

(HEMANGIOPERICYTOMA)
(MENINGES)

(BRAIN NEOPLASMS)

GLOWACKI, Jan

Inflammatory subdural hygroma. Neurol neurochir psych 12 no.2:223-226
Mr-Apr '62.

1. Klinika Neurochirurgii, Akademia Medyczna, Krakow. Kierownik:
prof. dr A. Kunicki. Krakow, Botaniczna 3.

*

GLOWACKI, Jan

Inflammatory subdural hygromas. Neurologia etc., polska 12 no.2:
223-226 '62.

1. Z Kliniki Neurochirurgii AM w Krakowie Kierownik: Prof. dr A.Kunicki.
(BRAIN NEOPLASMS case reports) (LYMPHANGIOMA case reports)

KUNICKI, Adam; GLOWACKI, Jan

Immediate and remote results of the surgical therapy of 170 cases of facial neuralgia. Neurol. neurochir. psychiat. pol. 13 no.3:325-330 '63.

1. Z Kliniki Neurochirurgii AM w Krakowie Kierownik: prof. dr A. Kunicki.

(TRIGEMINAL NEURALGIA) (NEUROSURGERY)
(POSTOPERATIVE COMPLICATIONS)

GLOWACKI, Jan

Traumatic subdural hygroma. Polski przegl. chir. 35 no.1:
31-38 '63.

1. Z Kliniki Neurochirurgii AM w Krakowie Kierownik: prof. dr
A. Kunicki.
(CYSTS) (BRAIN INJURY, ACUTE) (DURA MATER)

GLOWACKI, Jan

Fulminating papilledema. Neurol. neurochir. psychiat. pol.
13 no.2:225-227 '63.

1. Z Kliniki Neurochirurgii AM w Krakowie Kierownik: prof.
dr A. Kunicki.

(PAPILLEDEMA)

"APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515410018-6

SECRET

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515410018-6"

1. 11111111

LAURENCE, R.; and ALLEN, J.

Dept. of Physics Methodology, Higher Normal School
(Katedra Metodyki Fizyki, Wyższa Szkoła Pedagogiczna),
Warsaw (for both)

Crakow, Antony Flakel, No 5, 1st-Oct 1955, pp 545-557

"laser semi-conductors."

1. LUCHI, 1.

Monthly List of East European Accessions, 1. ALI, 1, no. 2, Feb. 1951.

1. LUCHI, 1. Vol. 13, no. 5, May 1951.

Monthly List of East European Accessions, 1. ALI, 1, no. 2, Feb. 1951.
Uncl.

GLOWACKI, P.

Settlement of deep-sea fishers in 1955-1956, p. 1. (OSPODAKHA BYNA, Warszawa, Vol. 7, no. 2, Feb. 1955.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. h, No. 4, Jan. 1955, Uncl.

POLAND/Electricity - Semiconductors.

G

Abs Jour : Ref Zhur Fizika, No 9, 1959, 20582

Author : Glowacki, Piotr

Inst : -

Title : Hall Effect and Its Application in Engineering

Orig Pub : Wiadom. elektrotechn., 1959, No 1, 11-13

Abstract : No abstract.

Card 1/1

- 52 -

GLCWACKI, T., kapitan, inzynier

Atomic energy in aeronautics and rocket technology; a collection of articles. Wojsk przegl 15 no.10:101-102 0 '61.

GŁOWACKI, W.

"Materiały metodyczne do nauczania maszynoznawstwa górniczego" (Methodical materials for teaching mining machine knowledge), by W. Głowacki. Reported in New Books (Nowe Książki), No. 13, July 1, 1955

GŁOWACKI W.

Wybrane zagadnienia metodyczne do nauczania maszynoznawstwa górnicaego (Selected methodical problems for teaching mining machine knowledge) by W. Głowacki.
Reported in New Books (Nowe Książki.) February 15, 1956. No. 4.

GLOWACKI, WITOLD WLODZIMIERZ

Fierwszy polski slownik farmaceutyczny i jego autor - Pawel Guldeniusz. Torun,
Nakl. Tow. Naukowego, 1953. 79 p. (Roczniki Towarzystwa Naukowego w Toruniu.
Rocznik 57, zesz. 1) /The first Polish pharmaceutical dictionary and its author,
Pawel Guldeniusz. German summary. illus., footnotes, name and place index/

East European Vol. 3, No. 3
SO: Monthly List of ~~Russian~~ Accessions/ Library of Congress, March ⁴1953, Uncl.

POLAND

GLOWACKI, Witold Włodzimierz [Affiliation not given]

"Apothecaryship in Old Rzeszow."

Warsaw, Farmacja Polska, Vol 17, No 3, 25 Apr 63, pp 161-162.

Abstract: The author presents an historical outline of the apothecary shops and apothecaries in Rzeszow in the 17th and 18th centuries, and data on the practice of this profession as gleaned from the available sources. He encloses a complete listing of apothecaries for 1611-1764. There are two (2) Polish references.

1/1

GLOWACKI, Witold Wlodzimierz

Tasks of historians of Polish pharmacy. *Farmacja Pol.* 19
no.19/20:41/-45 25 0'63

*

GLIWAKI, Harold W. (Harold)

Recent professional organizations of physicians in 1945.
Parsons Pol 21 10/1/45. 10-102 10-102 10-102

GLOWACZ, K.

Progressive protecting shielding by walling. Wiadom gorn 13 no.11:
406 N '62.

"APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515410018-6

APPROVED FOR RELEASE: 09/24/2001

CIA-RDP86-00513R000515410018-6"

P/035/61/000/002/002/003
A076/A126

AUTHORS: Głowacki, Zbigniew, Master of Engineering; Kurzawa, Zbigniew, Doctor

TITLE: The influence of heat treatment upon the corrosion resistance and some mechanical properties of 3H13 steel

PERIODICAL: Przegląd Mechaniczny, no. 2, 1961, 55 - 58

TEXT: Among the various types of corrosion-proof chromium steel the 3H13 and the 4H13 types, produced according to PN-54/H-86020 standard, in some cases present a number of problems. Both types showed a lower resistance against corrosion than was required. In order to ascertain and remedy the fault, 500 samples made of 3H13 steel were investigated. The 3H13 steel contained 0.33% of C; 0.48% of Mn; 0.21% of Si; 0.022% of S; 0.017% of P; 13.60% of Cr and 0.15% of Ni. The steel supplied by a steel plant was softened by annealing. The dimensions of the samples were 10 x 10 x 55 mm, as specified by the PN/H-04370 standard. The samples were milled, polished and numbered from 1 to 500. They were then hardened and annealed. The hardening temperature was 950, 1,000, 1,050 and 1,100°C. Preheating at 540 - 560°C was made in a salt-bath crucible furnace. The running process at hardening temperature was performed in a salt-bath elec-

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The influence of heat treatment upon...

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trode furnace containing BaCl_2 and lasted for 2, 5, 10, 20 and 30 minutes, respectively. Afterwards the samples were quenched in oil. Annealing was made successively at 100, 200, 300, 400, 500, 600 and 700°C. lasting for 30 minutes. In the same succession batches of 3 samples each were heat treated. The hardness impact strength and corrosion resistance were tested after hardening and annealing. The corrosion resistance tests were made as follows: samples were degreased in clear benzene and in an alkaline bath, i.e., 100 g of NaOH; 50 g of Na_2CO_3 dissolved in 1 l of water. All samples were submerged for 36 days in artificial sea water containing NaCl - 990g; MgCl_2 ; $6\text{H}_2\text{O}$ - 271 g; $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$ - 125 g; $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ - 30 g; K_2SO_4 - 32 g; and H_2O - 40 l. Test results showed that heat treatment influences mechanical properties of the 3H13 steel. By increasing the hardening temperature, the hardness also increases, but the impact strength is reduced. At a hardening temperature of 950°C the hardness strength is 40 → 46 HRC, depending on the austenitizing period, and at 1,100°C it is 56 HRC. Austenitizing time plays an important role in the hardening process. It was noted that hardness was proportional to austenitizing time. Impact strength of hardened steel was 4 kg/cm² at 950°C and about 1 kg/cm² at 1,100°C hardening temperature. Annealing at 950°C does not create basic changes in hardness, provided that the temperature range does not exceed 100°C. Annealing temperature of

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200°C insignificantly increases the hardness, drops at 300°C and increases again at 400 and 500°C. A sudden decrease in hardness was noted at 600 and 700°C. The 3H13 steel has the lowest corrosion resistance when hardened at 950°C and a higher one at 1,000, 1,050 and 1,100°C. Annealing in temperatures up to 500°C does not decrease its corrosion resistance, but higher annealing temperatures do. All changes in mechanical and corrosion-resistant properties of the 3H13 steel were caused by structural and phase changes during annealing. Considerable changes were noted in carbon found in chromium steel. This process was investigated by K. Kuo: "Iron and steel inst" T 173, 1953, 363 - 375 (Ref. 10). After annealing up to 500°C only (Fe, Cr)₃C carbon was found. Annealing at 525 - 625°C had the result that (Cr, Fe)₇C₃ carbon was formed and after tempering at 650 + 675°C (Cr, Fe)₂₃C₆ carbon was found in addition to (Cr, Fe)₇C₃ carbon. Above 700°C only (Cr, Fe)₂₃C₆ carbon was noted. According to investigation results the heat treatment conditions for 3H13 steel are as follows: hardening temperature 1,050 + 1,070°C; pre-heating time for a sample measuring 10 x 10 mm should be 10 min; oil should be used as coolant and annealing temperatures ranging from 400 + 450°C should not be exceeded. The 3H13 steel heat treated according to the above parameters will have good corrosion resistance, hardness strength of 50 + 53 HRC and impact strength of 5 + 6 kg/cm². There are 6 figures, 6 photos and 22 referenc-

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es: 4 Soviet-bloc and 18 non-Soviet-bloc.

ASSOCIATION: Politechnika Poznańska (Poznań Polytechnic)

Card 4/4

GLOWACZ, Jozef, technik strzelniczy

Use of distance insertions in blastings by the M method in filling walls. Wiadom gorn 13 no.11:405 N '62.

1. Kopalnia Rozbark.

44.1. 1959.

First Congress of the Ore Mining Industry. Warsaw, 1959. 9:
316-318 S 159.

GROWACZ, Kazimierz

Application of hardened filling in the Marchlewski mine for zinc-and-lead ore winning from the protection pillar of the city of Bytom. Wiadom gorn 11 no. 12:446-450 D '60.

GLOWACZ, Kazimierz

A contribution to the problem of the identification, occurrence and deposition of heavy sands on the Hel Peninsula. Przem chem 39 no.3:148-152 Mr '60.

1. Zakłady Gornicze im. J. Marchlewskiego, Bytom

GLOWACS, Kazimierz

Activities of the factory circles of the Katowice II Branch
of the Association of Mining Engineers and Technicians.
Wiadom gorn 12 no. 12:439-441 D '61.

P/014/61/040/003/004/005
A221/A126

AUTHORS: Biernat, Janusz; Głowacz, Kazimierz; Łoziński, Jan; Pilch, Władysław and Stachurski, Józef

TITLE: Production of commercial concentrates of zircon, ilmenite and monazite from indigenous sea sands

PERIODICAL: Przemysł Chemiczny, no 3, 1961, 149-150

TEXT: In this article a method is described by which zircon, ilmenite and monazite concentrates can be obtained from sea sands. For several years the Instytut Metali Lekkich (Light Metals Institute) carried out investigations in that direction but without success. The authors managed to develop the method by which a product of standard purity can be obtained. The final zircon concentrate is obtained by separating same from rutile by means of flotation. Before floating the mixture of zircon and rutile grains must be specially treated with 0.4% solution of fatty acid salts at 95°C. By doing so selective adsorption takes place and fatty acid anions are adsorbed by zircon.

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Production of commercial ...

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A221/A126

grains. After this treatment the grains are washed first in water and afterwards with diluted sulfuric acid. Fatty acids adsorbed are now converted into fatty acids hard to solve. Fatty acids are not wetted by water, therefore zircon grains are becoming hydrophobic. From the mixture so prepared, titano-magnetite, ilmenite and garnet are removed by magnets and the remaining grains diverted into flotation chamber. Before flotation this mixture contained about 70% zircon, 14% rutile and 14% of other opaque minerals. After flotation the concentration of zircon is increased to 97% with 87% efficiency. Obtaining ilmenite concentrate. From the sea sands treated with magnetic enrichment, a mixture of ilmenite and titano-magnetite was obtained. This mixture was roasted in CO atmosphere at 700°C. The product of this treatment was subjected to another magnetic enrichment from which two products were obtained. The titano-magnetite and ilmenite with 50.25% of TiO_2 . Monazite separation. In sea sand samples 0.1% of monazite was detected. In the concentrate obtained there were 90.87% of monazite, 1.5% zircon, 0.9% of garnets and 6.65% of opaque minerals. (Abstractor's note: No details of monazite extraction are given.) The authors conclude. Polish sea

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Production of commercial ..

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sands are raw materials for commercial concentrates of zircon, rutile, ilmenite, monazite and titano-magnetite. Zircon and rutile are separated by flotation. Separation of ilmenite from titano-magnetite is achieved by reducing roasting and magnetic separation. There are 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc. The references to the English-language publications read as follows: Non-Ferrous Ore Dressing in the USA. Documentation nr 54 Published by the Organization for European Economic Cooperation, Paris. H.H. Dunkin, Ore Dressing Methods in Australia and Adjacent Territories, Melbourne, 1953. K.L. Sutherland, I.W. Wark, Principles of Flotation, Melbourne 1955. ✓

ASSOCIATION: Katedra Przeróbki Mechanicznej Kopalni Akademii Górniczo-Hutniczej (Mining and Metallurgical Academy, Chair of Mechanical Processing of Mined Raw Materials) Kraków.

SUBMITTED: 15 December 1960

Card 3/3

GLOWACZ, Kazimierz, inz.

Nonferrous ore mining in Yugoslavia; with special reference to
the Bor and Trepca mines. Rudy i metale 6 no.10:458-463 0 '61.

GLOWACZ, Kazimierz, inz.; SEWERYNSKI, Boguslaw, dr., inz.

Nonferrous metal ore mining in Yugoslavia. Pt. 2. Rudy i metale 6
no.11:500-506 '61.

(Yugoslavia--Nonferrous metals)

GLOWACZ, Kazimierz, inż.

The seventeenth "Próborka" in People's Poland. Rudy i metale 6 no.12:
525-526 D '61.

1. Prezes Stowarzyszenia Inżynierów i Techników Górnictwa, Oddział
Katowice II.

GLOWACZ, Kazimierz, inż.; KLUSZCZYŃSKI, Aleksander, inż.; SEWERNIŃSKI,
Bogusław, dr., inż.

Mining of nonferrous ores in Yugoslavia. Pt. 3. Rudy i metale
6 no.12:551-559 D '61.

GLOWACZ, K., inż.

The tasks of the technician and engineer in the mining industry
of nonferrous ores. Przegl techn no.39:5,7 30 S '62.

KRZYWDZINSKI, Stanislaw, mgr., inż.; GLIWACZ, Kazimierz, inż.

Application of operational tests in nonferrous ores dressing.
Rudy i metale 7 no.1:12-15 '62.

GLOWACZ, Kazimierz, inz.

Self advancing movable shield supports. Rudy i metale 7
no.7:330-333 JI '62.

GLOWACZ, K., inz. -

An automation device for the PR-80 type mining pumps. Rudy i
metale 7 no.91429-430 S '62.

KACPRZAK, Wincenty, mgr inż.; GLOWACZ, Kazimierz, inż.; LUBOCH, Władysław,
mgr inż.; LEMPART, Stanisław, inż.

Increase of the mechanization of Zn-Pb ore winning in the
mining industry. Rudy i metale 7 no.12:539-546 D '62.

GLOWACZ, Kazimierz, inz.

Tasks of technicians and graduate engineers in ore mining. Part I
metale no.2:73-75 F '63.

KRZYWDZINSKI, Stanislaw, mgr inż.; GŁOWACZ, Kazimierz, inż.

Application of operational research in the nonferrous ore industry.
Pt.2. Rudy i metale 8 no.1:1-6 Ja '63.

GLOWACZ, Kazimierz, mgr inz.; KRZYWDZINSKI, Stanislaw, mgr inz.

Operational research in the nonferrous ore industry. Pt. 3.
Rudy i metale 8 no.4:129-132 '63.

GLOWACZ, K., mgr inz.

Probe for acoustic profiling of drilling holes. Rudy i metale
8 no.4:141-142 '63.

GLOWACZ, Kazimierz, mgr inz.

How to increase the winning of ores? Przegl techn 84 no.48:5
1 D '63.

GLOWACZ, K., mgr inz.

Annual Meeting of the Association of German Mining and Metallurgy
Engineers and the International Symposium on Special Materials for
Electric Engineering, Erfurt, October 15-19, 1963. Rudy i metale 9
no.2:100-103 F 04.

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CIA-RDP86-00513R000515410018-6"

GLOWACZEWSKI, Marian, inz.; KRAWCZYNSKI, Feliks, mgr inz.

Completely welded Ok55-3 type locomotive frame. Przegl kolej
mechan 13 no.8:237-239 Ag '61.

GRONKOWSKI, A.

Organization of work and the selection of assortments in the employment of the disabled. p. 5.

(RACJONALIZATOR, Vol. 4, no. 2, Feb. 1957, Warszawa, Poland)

SC: Monthly List of East European Accessions (EEAL) LC. Vol. 8, No. 12, Dec. 1957.
Uncl.

S/275/63/000/002/026/032
D405/D301

AUTHORS: Tabin, J., Kurek, M. and Glowalla, J.

TITLE: Ultrasonic device for fast control of thick-sheet iron

PERIODICAL: Referativnyy zhurnal, Elektronika i yeye primeneniye, no. 2, 1963, 50, abstract 2V184 F (Pol'sk pat., kl. 42 k, 47, no. 44683, 20.07.61 (Polish patent))

TEXT: The patented device permits fast control by the contact method, of iron sheets of a non-worked surface. It consists of a box-like body which moves on rollers; the body contains 2 groups of transducers which operate under generation and reception conditions respectively, and which are separated from each other by a sound-insulating partition (textolite, cork) reaching to the very bottom of the body. The contact liquid is driven from above, via a flexible hose inside the body, into a reservoir situated on the transducers. The excess contact liquid together with the gas bubbles rising from its surface, is removed via a slot in the upper

Card 1/2

S/275/63/000/002/026/032
D405/D301.

Ultrasonic device ...

part of the side-wall of the body. From the reservoir the main liquid flow is driven via a pair of flat nozzles into the lower pressure chamber, situated directly above the sheet under investigation. The nozzles are placed on both sides of the transducers, towards the roller mounted on bearings behind and in front of the body. The presence of the pressure chamber ensures the automatic wetting of the sheet and reduces the dead zone. The body is equipped with a long handle, used by the operator for moving the former during checking.

[Abstracter's note: Complete translation]

Card 2/2

BLAKALA, Kazimierz, inz.; MICHALIK, Janusz, inz.; RESPONDER, Alojzy, inz.
TARNOWSKI, Ladyslaw; GIOHANNA, Edward

Increasing the disposable power of the power plant of the Florian
Steel Works by 7 MW. Gosp paliw 11 Special issue nc.(95):59 Ja '63.

1. Huta Florian- kopalnia Polska.

GLOWANIA, Jerzy, mgr

New articles of the Carl Zeiss Jena Works at the Leipzig Fair
1963. Chemik 16 no. 4:117-119 Ap '63.

GLOWANIA, Jerzy, mgr

Chemical concerns at the 32d International Poznan Fair;
The Imperial Chemical Industries of Great Britain. Chemik
16 no.7/8:202-205 Pl-Ag '63.

1. Politechnika Slaska, Gliwice.

GLOWATZKI, Ernst

Mathematical Review
June 1954
Numerical and
Graphical Methods

(2)

✓Glowatzki, Ernst. Tafel der Jacobischen elliptischen Funktion $\varphi = am\left(\frac{m}{n}K\right)$. Abb. Bayer. Akad. Wiss. Math.-Nat. Kl. (N.F.) no. 61, 27 pp. (1953).
Table to three decimals of a degree of Jacobi's

$$\phi = am[m \cdot K/n; \sin \theta]$$

for $n=2(1)12$, $\theta=0^\circ(1')99^\circ$ to enable Jacobi's elliptic functions to be calculated from trigonometric tables. [The author seems to be unaware of the existence of the reviewer's "Die elliptischen Funktionen von Jacobi" [Springer, Berlin, 1931] and "Jacobian elliptic function tables" [Dover, New York, 1950; these Rev. 13, 937] which give results directly.]
L. M. Milne-Thomson (Greenwich).

7 Structure of *o*-diazoxides. B. Glowiak (Politechnika, Wrocław, Poland). *Bull. acad. polon. sci., Sér. sci., Chim., géol. et géograph.* 8, 1-4 (1960) (in English).—Infrared absorption spectra of 8 *o*-diazoxides (I) were measured between 4.3 and 7.7 μ and compared with spectra of similar compdn. It was found that 4,6-dinitro-3-diazophenol (i.e. diazoide obtained by diazotization of picramic acid), 2,6-dinitro-4-diazo-*m*-cresol, and 4,6-dinitro-2-diazo-*o*-resorcinol (II) have a quinoid structure, and that 5-nitro-3-diazosulicylic acid, its Pb salt, 4,6-dinitro-2-diazo-3-hydroxybenzoic acid, and its Pb salt have a diazonium structure. Pb salt of II may have either quinoid or diazonium structure. Quinoid I are dark yellow or dark brown, sol. in org. solvents and dil. inorg. acids, and they decomp. and darken in light; diazonium I are light yellow, sparingly sol. in org. solvents, less thermolabile but more sensitive to impact, friction, and flame than quinoid I. J. Stecki—

3
1-81-9 (NB)

11/22
1/1

Distr: 4E3d

1
/ Lead salts of aromatic azides. B. Glowinski (Politech.,
Wrocław, Poland). *Bull. acad. polon. sci., Ser. Sci., Chim.,
géol. et géograph.* 8, 5-8(1960)(in English).—Investigations
on new initiating explosives were reported. The soln. of
diazodinitrophenol in 30-25-fold amt. of Me_2CO , treated at
35-40° with 10% soln. of Na azide introduced in stoichio-
metric proportion, dropwise and with vigorous stirring, gave
a soln. of 4,6-dinitro-2-azidophenol Na salt, which, acidified
with a few drops of dil. HNO_3 and treated with 10% aq.
 PbNO_3 added dropwise at 25-30° in a 15% excess, gave a
light brown ppt. This filtered off, rinsed with H_2O and
dried at 40°, afforded 4,6-dinitro-2-azido phenol Pb salt in
90% yield. In a similar way were prepd. Pb salts of 2,6-
dinitro-4-azido-m-cresol and 5-nitro-3-azido-salicylic acid.
Infrared absorption spectra showed for all 3 salts the N_3
azide group, 2140, and no quinoid-structure, 1664 and 1653
 cm^{-1} absorption bands, irrespective of the quinoid or
diazonium structure of the corresponding diazoxides. The
susceptibilities to impact, flame, and detonation, and the
ignition temp. were detd. The compds prepd. were found
to be similar to Pb trinitroresorcinate and thus were "pseu-
donitiating" explosives.

J. Stecki

3
1. Jaf (NB)

1/1
7/2
8

GLOWIAK, B.

Distr: 4E3d

1

Structure of diazonium salt of nitroform. B. Glowiak
(Politechnika, Wrocław, Poland). *Bull. acad. polon. sci.,
Ser. sci., Chim., géol. et géograph.* 8, 9-12(1960)(in English).

The Ponzio synthesis (C.A. 19, 1178) was modified as
follows: a mixt. of 20 ml. HCl, d. 1.9, 60 g. ice, and
9.3 g. PhNH₂ was diazotized at 0° with 7 g. NaNO₂, the
soln. left 10-15 min., and 15.1 g. HC(NO₂)₃ added to obtain
PhC(NO₂)₃ (I) in 82% yield after simple crystn. from
Me₂CO. I was hygroscopic and darkened in light. In-
frared absorption spectra between 6 and 8 μ were examd. and
compared with those of phenyldiazonium acetate, trinitro-
methyl chloride, nitroform, and the K salt of nitroform.
Absorption bands of 1629, 1374, and 1291 cm.⁻¹, as well as
the lack of absorption in the region of 2237 to 2132 cm.⁻¹

(N≡N bond), indicated a structure [PhN⁺≡N]⁺C(NO₂)₃⁻
for I. J. Stachurski

3
1-94 (NB)
1

11/8K

Distr: 4E2a/4E3d

✓ Some [explosive] properties of *N,N'*-dinitromethylenediamine. ¹ Bohdan Głowiak. *Bul. Wojskowej Akad. Tech.* im. Jarosława Dąbrowskiego 9, 77-82 (1990) (English summary); cf. Piskorz and Urbański, *CA* 54, 17012f. —CH₂(NHNO₂)₂ (I), m.p. 103°, prep'd. after Brian and Lamberton (*CA* 44, 14104), had velocity of detonation 8364 m./sec. at d. (of cartridge) 1.7, explosion temp. 217°, and impact test (picric acid as 100%) 100%; PbN₂ min. detonating charge was 0.005 g.; wt. losses of I (60°, 500 hrs.) were 4 and 2.5% in an open and sealed vessel. Pb salt of I, m.p. 40°, showed explosion temp. 193°, impact work 0.0584 kg. m./sq. cm., and fired from a burning string from a distance of 2-3 cm.; wt. losses at 60° after 24, 48, 76, 100, 200, 300, 400, and 500 hrs. in an opened (and a sealed) vessel, were: 0.24 (0.0), 0.38 (0.05), 0.48 (0.10), 0.52 (0.15), 0.54 (0.15), 0.58 (0.15), 0.58 (0.15), and 0.60% (0.15%), resp.; water absorptions after 24, 48, 76, 100, 200, 500, and 1000 hrs. at 80% (100%) relative humidity, were: 0.11 (0.14), 0.16 (0.37), 0.20 (0.50), 0.23 (0.68), 0.30 (0.80), 0.38 (0.84), and 0.52% (0.93%), resp. I had an absorption band at 1582 cm.⁻¹; the Pb salt had not, unless acidified. I was considered similar to pentaerythritol tetranitrate as regards explosive characteristics. A. Szufniewski

4
1-BW(BW)
2-90f(NB)(mg)
2-

GLOWIAK, Bohdan; SMOLENSKI, Dionizy

The influence of metallic ion on the sensitiveness of azidophenol salts. Chemia stosow 4 no.2:253-263 '60. (EEAI 10:3)

1. Katedra Technologii Zwiaskow Azotowych II Politechniki Wroclawskiej.

| | | | |
|----------|----------|---------------|----------|
| (Ions) | (Metals) | (Azido group) | (Phenol) |
| (Cresol) | | (Nitro group) | |

GLOWIAK, B.

On the structure of ortho-diazoxides. Bul chim PAN 8 no.1:1-4
'60. (KEAI 10:9/10)

1. Department II of Technology of Nitrogen Derivatives, Technical
University, Wroclaw. Presented by T. Urbanski.

(Diazo compounds) (Oxides)

GLOWIAK, B.

Lead salts of aromatic azides. Bul chim PAN 8 no.1:5-8 '60.
(BEAI 10:9/10)

1. Department II of Technology of Nitrogen Derivatives, Technical
University, Wroclaw. Presented by T. Urbanski.

(Lead salts) (Azides) (Aromatic compounds)

GLOWIAK, Bohdan

Diazo oxide structure. Rocz chemii 34 no.5:1349-1363 '60,
(EEAT 10:9)

1. Department of Nitrocompounds Technology II, Institute of Technology, Wroclaw.

(Diazo compounds)

11.8200

3/157
POL/16/61/000/001/001
0225/0301

AUTHORS: Głowiak, Bohdan, Doctor of Engineering, Assistant Professor, and Smoleński, Dionizy, Professor

TITLE: An attempt to interpret explosive properties

PERIODICAL: Wiadomości chemiczne, no. 3, 1961, 151-165

TEXT: This is a short review, based chiefly on the works of Western investigators, of tentative correlations between certain explosive properties, compositions, structures and thermochemical parameters of explosives. Of the earlier workers, W. Plac (Ref. 1: ŻOCh, 1935, 5, 173) defined explosives as compounds containing explosophores and auxoexplosives, by analogy with chromophores and auxochromes. This work is considered to be of historical interest only. Oxygen balance is next defined, the author stressing that no distinction is made between oxygen bonded to carbon or hydrogen and oxygen bonded to nitrogen; the majority of explosi-

Card 1/6

An attempt to interpret ...

POL/16/61/82187
D228/D301 000/003/001/001

ves are stated to be oxygen-negative. A brief account is given of the work of W.C. Lothrop and G.R. Handrick (Ref. 6: Chem. Revs. 1949, 44, 419), who found the explosive power to be proportional to the oxygen balance, increasing to a maximum as the oxygen balance tends to ward zero. These authors introduced the term "plosophores" for groups bestowing explosive properties on a molecule, and divided them into two fundamentally different classes. Primary plosophores include nitric esters, aromatic and aliphatic nitro-compounds and nitroamines, whilst azo- and azido- derivatives, nitro-compounds, perchlorates, peroxides ozonides etc. belong to the secondary class. Relationships between the shattering power and the oxygen balance are illustrated for aromatic nitro-compounds, nitroamines and nitric esters, showing that for these compounds the maximum power is associated with zero oxygen balance. Molecules with several plosophoric groups ("hybrids") exhibit a similar effect, although the relationship is less regular. No such relationship has been found for the secondary

Card 2/6

An attempt to interpret ...

⁸⁵¹⁸⁷
POL/16/61/000/003/001/001
DELB/D501

plosophores or groups such as -OH, -Cl, -CO (auxoexplosives) which modify the properties of explosive compounds. This is ascribed to the lack of differentiation between O-C or O-H and O-N bonds in calculating the oxygen balance. The same authors also found that oxygen balance affected detonation velocity, although the relationship is not well defined. Discussing Lothrop's and Handrick's work, A. Schmidt (Ref. 7: Chimie et Industrie, 1952, 67, 253) considers that the effect of oxygen balance on the explosive power should be supplemented with thermochemical data. Heat of explosion is defined as the difference between the heat of formation of the explosion products (q_p) and the heat of formation of the explosive from the elements (q_f). Oxygen balance is connected with, but not a function of q_p which increases with the ratio $\frac{H}{C}$ for the same oxygen balance, and decreases with increasing nitrogen. Relative proportions of other atoms and the nature of the oxygen should thus be considered in assessing the oxygen balance, since these influence q_f which, according to Card 3/6

An attempt to interpret ...

³⁵¹⁸⁷
POL/16/61/000/003/001/001
D228/D301

Schmidt, is the dominant factor influencing the explosive properties. Mention is made of the work of J.F. Roth (Ref. 9: Z. Schiess-u.Sprengstoffwesen, 1941, 36, 4, 28,52) who found that for mixtures of tetranitromethane and nitrobenzene, the explosive properties increased to a maximum as the oxygen balance approached zero, and that of A. Stettbacher (Ref. 2: Z. Schiess-u.Sprengstoffwesen, 1918, 13, 225; 1919, 14, 220; 1920, 15, 165; 1930, 25, 439; 1942, 37, 42, 62) who believes that structure of the explosive is the dominant factor. This is shortly discussed quoting several authors including D. Smoleński and W. Czuba (Ref. 11: Zesz. nauk. Politechniki Wrocławskiej; Chemia, 1955, 7, 3) and T. Urbański and K. Kruszyńska Szyc-Lewańska (Ref. 12: Biuletyn WAT, 1953, 4, 3, and Ref. 13: ibid., 1953, 4, 14) showing that various groups can affect the explosive properties. M. Berthelot and Matignon (Ref. 15: Compt. rend., 1891, 113, 246) show that the heat of combustion decreases by ~ 31 kcals for every additional $-NO_2$ group in the ring, concurrently with increasing ex-

Card 4/6